

Never Give Up!

But I Thought *You* Did It!

Getting My Third Trap  
the Hard Way



# inside approach

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On the Cover A VAQ-134 Prowler fires a HARM during Operation Allied Force. (Photo by Lt. Chris Field.)

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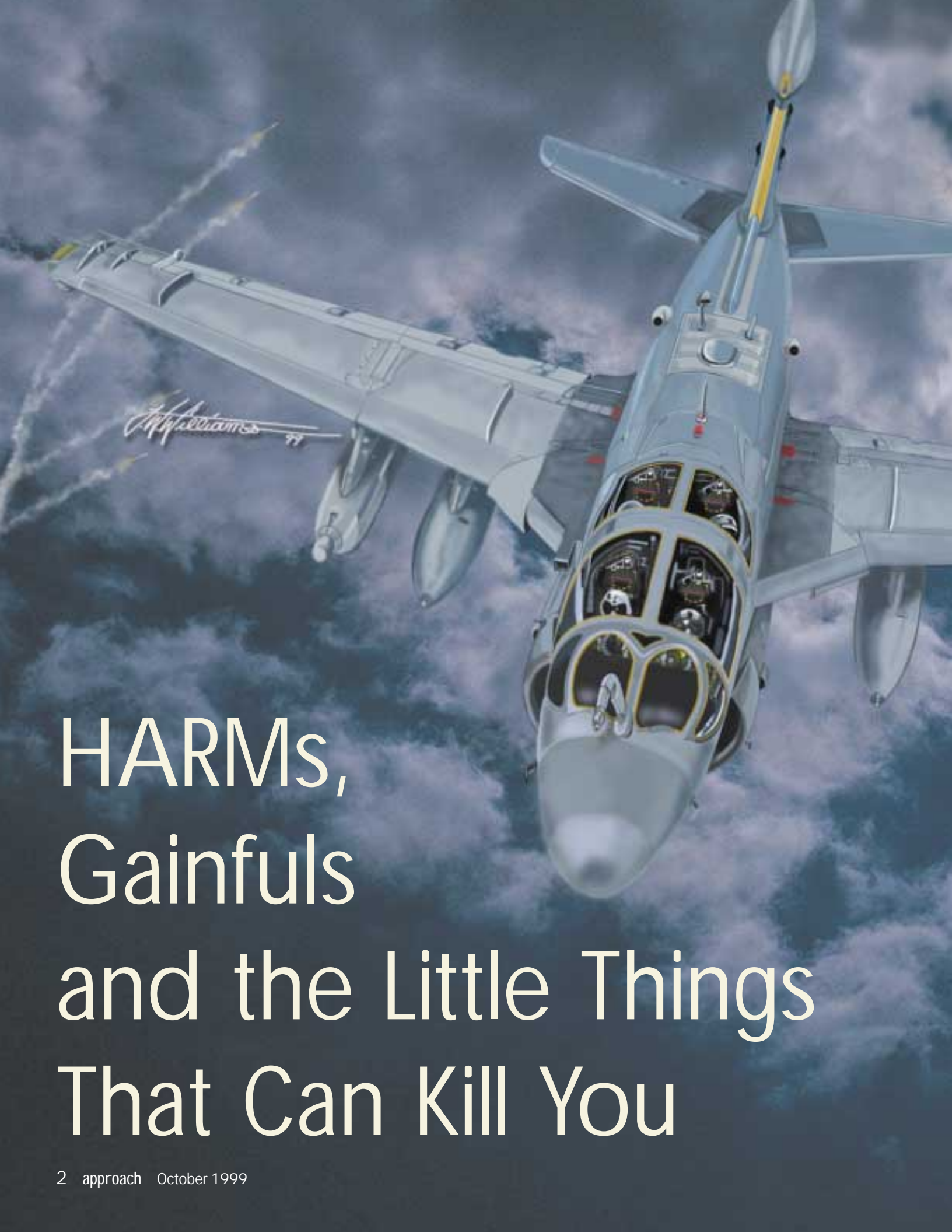
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# HARMs, Gainfuls and the Little Things That Can Kill You

by Lt. Dave Bartell

**I**t was a cold, clear night over Kosovo as I went into tension on the cat for my first combat mission. Here I was, 11 days into my nugget cruise, throttles at mil, live HARM armed up, and a loaded 9mm pistol digging into my ribs. For years, I'd wondered what combat would really be like, and somehow I'd imagined myself much more nervous than I was tonight, but I suppose all the training we'd done over the last year made it all seem normal...at least for now.

As we launched and headed for the tanker, however, my facade started to crack. Strike Lead reported that some of the tankers never made it off the deck, so everything started to go audible. A plan started to form. I continued in for a top-off at my assigned altitude.

As I got to the tanker stack, I found everybody's tanker but mine, and after about 10 minutes of floundering around with no joy and two wingmen in tow, I finally

confessed to the Strike Lead that we couldn't find a tanker. We were immediately relieved to hear an apologetic voice reply that Prowlers were now tanking 2,000 feet higher. Unfortunately, push time was rapidly approaching.

Somehow, we found the tanker, got in the basket, and began taking fuel, with only seconds to spare. We then bustered out on our mission.

In our haste to get in the basket and back on timeline, however, we found ourselves doing ad-lib tanker checks. Amazingly, after tanking, we actually found our way to our HARM-shot point within one second of our planned time. I let loose my first live shot in anger.


The HARM is a wonderful weapon, and though you may not always end up with Gucci video of burning hulks of steel in its wake, just the fact that enemy SAM drivers live in fear of my "Magnum, magnum!" call is good enough for me. I did find, however, firing that missile on a clear, dark night is like being center stage in a rock concert as everyone's eyes are free to follow the smoke trail back to greet the Prowler that just sent a thousand-pound love note.

Within about 10 seconds of our shot, our Serbian counterparts answered us with a volley of SA-6 Gainful missiles. My crew relied on what we knew, and the jet started its first of many defensive maneuvers. Somehow, in the midst of our defending, I realized I wasn't quite as cool as I had been about this combat thing an hour ago. Even at the height of our defensive maneuvers, I managed to call out our altitudes, gas, tapes, and gauges. Our mission seemed to end as quickly as it started, and my crew and I were busy sharing high fives to celebrate our combat debut. Still, I felt that something wasn't quite right.

Finally, I realized what was bothering me. In our haste to get the gas and on with the mission, we'd ended up ad-libbing our tanker checks on the front side, and didn't even do any on the back! Consequently, as I was congratulating myself for having the presence of mind to monitor the jet during our maneuvers, I failed to realize I had been reading the fuel totalizer, instead of what was in the main bag, which is all the jet really cares about if you expect it to keep flying.

By the time I realized our mistake, the totalizer was telling me we had a comfortable 7,500 pounds, but the main bag was hovering just above the low-fuel light at 2,100. Instantly, I glanced down and cursed myself as I saw the refueling switch still in flight position from the tanker (which depressurizes all the other tanks and renders them useless).

At times like these, it's almost comical to watch how quickly you fall from hero to goat. We were able to get the tanks back in override. I was finally able to use all the gas that was stuck in the wings, and in the end, flew an uneventful OK-3.

Combat is unforgiving, and people on the ground are working hard to kill you, but so are people in the air (and in some cases, it may even be you). With all the stress on "doing it for real," it still pays to emphasize the mundane stuff you've been doing since day one. I would have hated to come back and explain to the skipper and XO that we'd done a Sierra Hotel job of evading four SA-6s, only to run out of gas and have to eject seconds later. Still would have been a point for the other team. There's a lot to pay attention to if you want to survive combat ops, and one of the most important things I've learned is to always remember the basics. 

Lt. Bartell flies with VAQ-141.

I had just finished the FRS and was three months into my first deployment when I learned one of the most valuable lessons in aviation:

# Never Give Up!



*by Ltjg. Andy Carnell*

**C**lear and a million, 20,000 pounds of gas, 10 o'clock brief for a 1 v 1 ACM hop. Life doesn't get any better.

Hard work and great timing put me in the back seat of an F-14 for what promised to be a memorable flight. I had just finished the FRS and was three months into my first deployment when I learned one of the most valuable lessons in aviation: Never give up.

My pilot and I had launched over the sparkling blue waters of the Arabian Gulf and were conducting a gun-snapshot drill while pressing out to station. Our lead had three uneventful runs before we took over the "shooter" role and turned in for our first shot.

"Trigger down, snap..." my pilot called, but instead of the usual follow-on assessment of the shot, all I heard was a loud bang as the plane began to shake violently. What had happened? We weren't carrying any ordnance, and I knew we hadn't sucked down a bird at that altitude. Our engine had just exploded!

I immediately asked if he had it, and he replied the left engine was shut down and we had zero pressure on the primary-main-hydraulic system. OK, I had seen this scenario before in the simulator: Turn the plane back toward the carrier and transmit intentions for a single-engine recovery. We had lost an engine and a hydraulic system, but the day was clear, and we were only 25 miles from the boat.

While we broke out the checklists, we directed our wingman to contact the ship and make arrangements for an emergency pull forward. It wasn't an optimum situation, but things could have been worse.

Unfortunately, they did get worse. As we worked our way through the single-engine procedures, other systems started failing, one after another. Once recovery aboard the carrier was confirmed, we extended the hook and landing gear by emergency means. But when we tried to lower the flaps, they did not move. We would have to come in fast, and the ship needed more time to get the proper amount of wind over the deck ... not an easy set of tasks when working with the light winds of the Arabian Gulf.


As we approached the overhead, we checked the aircraft's controllability. Over the next few minutes, we lost each of our Tomcat's three stability augmentation systems (SAS). The lack of pitch, roll, or yaw SAS—coupled with the simultaneous failure of the inboard two spoilers on each wing—gave us a very sluggish airplane at approach airspeed.

As we descended and prepared for the straight-in, we were burning fuel on the operating engine's feed tank faster than it was transferring in. We ended up with as little as 800 pounds in the right, operable feed tank. Any sustained use of military power quickly reduced our immediate


usable fuel quantity in the feed tank. The tank twice filled back up to 1,200 pounds from the 4,000 pounds remaining in the inoperative side.

The carrier had done a great job clearing the flight deck and creating enough wind over the deck to make our landing possible. But, no one had set our weight of 52,000 pounds for the arresting gear, and at a half a mile from the ship, we were directed to wave off.

Our fuel-feed problem was becoming critical. The waveoff and turn downwind were taking us uncomfortably close to flaming out the operating engine. Diverting or tanking were out of the question. If we didn't trap the next pass, the ship was planning to rig the barricade. Fortunately, the second time around, the deck was ready and after a few intense moments in the groove, we recovered safely with the forward section of our left engine continuing down the landing area and falling over the side. Our left engine-fan section had disintegrated.

Taken as a whole, the number of failed systems on the aircraft presented us with an almost insurmountable dilemma. By focusing on the procedures to handle each problem individually and collectively, using crew coordination, coupled with help from our wingman and the ship, we recovered a very sick Tomcat. It was a good lesson for this nugget to learn the hard way. Never give up! 

Ltjg. Carnell flies with VF-102.



We recovered safely with the forward section of our left engine continuing down the landing area and falling over the side. Our left engine-fan section had disintegrated.



# 4 peo

At the end of the stroke, the pilot's side lighting and electronic flight-instrument system (EFIS) went dark.

*by Ltjg. Dwight Clemons II*

**I**t was my first night catapult shot in the right front seat of the EA-6B. I'd been in the squadron about two weeks, and they'd started my fleet experience with a green-ink hop over Iraq. That flight had been in the back seat, but tonight my mind was filled with the front-seat basics: calling airborne, passing 2.5, checking the nav.

The brief had concentrated on my responsibilities, and more than one experienced ECMO and pilot reminded me to have my flashlight in my hand, just in case we lost electricity on the cat shot.

# ple, No Waiting


The cat shot was solid, and even with my limited experience, I knew it was a good one. At the end of the stroke, the pilot's side lighting and electronic flight-instrument system (EFIS) went dark. The cockpit lighting on my side was fine, and for the first few seconds of flight, just my flashlight was illuminating the backup attitude-reference indicator.

As suddenly as they'd gone out, the lights and EFIS came back on. This event started a series of power losses that would last for a second or two and then clear up.

We climbed to 14,000 feet, checking in with departure, who passed us over to marshal. We also started talking to our CATCC representative. The next learning point for me was how busy the comms suddenly became. All three of the Prowler's radios seemed to be going off at once, along with the ICS, and we were fighting electrical problems.

We decided to pull the RAT and get back aboard as quickly as possible. The PCL didn't help in this situation because it wasn't a complete electrical failure, and the systems affected were not all on the same circuit breakers or buses. The problem wasn't clear cut, and as it turned out, by the end of the flight, we'd fried a major DC relay and an AC-essential-bus relay.

Because we had intermittent EHSI, we elected to take no gyro vectors to final (our CATCC rep recommended it to the controller). On our first approach, we lost the ability to dump from the wings, and we had to wave off. On our second approach, we had no speedbrakes, ICLS, stab aug, external lights, or cockpit lighting on the pilot's side. We trapped, only to lose ICS, radios, nosewheel steering, and antiskid among other things and had to be towed out of the landing area.

Looking back, we realized we had not taken full advantage of cross-cockpit EP techniques, having the right-backseater help the pilot on airspeed and altitude and the left backseater assist the right frontseater with checklists and fighting the problem. We relied too much on the experience level of the back leftseater and didn't take full advantage of having four people in the airplane. Also, we didn't brief the possibility of losing comms when we landed, and we should have warned approach that we'd be NORDO and needed to be towed out of the gear. I also learned that it's easy to get bogged down on the radios (I never expected so many people talking at once). Aviate, navigate, communicate is still the basic rule. Emergencies wait for no experience level. 

Ltjg. Clemons flies with VAQ-136.

# Saving the Day Over the Gulf



*by Lt. Bill Cushman and Lt. Dan Baxter*

Going down the cat stroke for a little night bombing, the RIO caught the glint of the master-caution light reflecting on the side of the canopy. Not the best way to start a flight. Immediately, the pilot stepped through the single-engine boldface, “Good engines, setting ten degrees, fourteen units.”

Once the aircraft was accelerating and climbing away, we determined we had two good engines, two pitch-stab lights and a spoiler problem. We decided to hold off on the troubleshooting until at least above

10,000 feet. The pitch-stab lights went out, but the spoiler light remained.

We determined that the outboard spoilers didn’t work and were the reason the spoiler light lit up. This made sense because the pitch computer also controls the actuation of the outboard spoilers.

We met our lead at the rendezvous point at 15,000 feet, instead of the briefed 5,000 feet, so we could have some altitude to play with in case we had trouble controlling the aircraft. Lead said we were streaming fuel from our dump mast. Since we were only 10



minutes into a one-hour hop, our last thought was running out of gas as we troubleshooted the spoiler problem.

Pulling the dump-control circuit breaker fixed the streaming-fuel problem, but now each engine fuel supply was isolated from the other, which can cause problems if you are single-engine in a Tomcat. The fuel trapped on the bad engine side is unusable. Nah, that would never happen...

At this point, we knew that we weren't going to be dropping bombs. Both crews started clearing the sea space below them to

jettison our bombs. Getting the bombs off was important because their weight translated to extra gas on the ball.

The next course of action was to slow-flight the aircraft to check how it handled at approach speed. There was a short discussion that if we departed controlled flight, we would unload, raise the flaps and add power.

As we slowed down and dirtied up, the aft pitch trim stopped working. The pilot could trim forward, but could not trim aft to any degree. With quite a bit of gas over max trap and some bombs still in the belly, on-

speed still required about five pounds of aft-stick force to compensate for the inoperative trim.

Once we had configured the F-14 for landing at a significantly lower gross weight and slower airspeed, a much greater stick force would be needed to maintain attitude. Also, since we realized the pitch computer was fried, we would be on the ball without outboard spoilers, no pitch trim, and no DLC. No DLC subtracted 6 to 8 knots from our approach speed, further aggravating the pitch-trim problem. Without DLC, an overpowered approach is hard to fix without a substantial decrease in power.

To complicate matters further, a fuel split had developed. The right side was lower by 1,500 pounds, but this did not meet our criteria (one side below 4,500 with a 2,000-pound split) to manually balance it.

As we cleaned up, we checked the drop area once more, dropped the bombs and started heading back toward mother.

Once inbound, we asked for a rep and explained all the problems. The skipper was down in CATCC and discussed the handling characteristics and the increased aft-stick pressure that would be required in the approach configuration.

Marshal set us up for a bow-on recovery. We gave CATCC a heads-up that we would like at least a 5-mile hook to get lineup squared away and a better feel for the aircraft's handling. We dirtied up and turned inbound at seven miles.

While in the turn, the pilot said over the ICS, "Just between you and me, this approach is going to be sporty. It's taking quite a bit of aft force—about twenty pounds—

every half mile. At three miles, one TACAN quit, and the RIO started calling airspeed since no DME information was available. ACLS needles showed us two needle-widths high...nothing wrong with being on the happy side.

At about a quarter mile from the ramp, the RIO could hear the engines spool down. The armchair LSO sitting six feet aft of the pilot called, "Power back on." The RIO was thinking, "Uh, oh, he is going to try to fix this high." At this time, the aircraft was starting to yaw to the right. The pilot already had the power back up and was also feeding in rudder to counteract the yaw.

We hit the deck as paddles called, "Bolter, bolter, bolter." In our case, that was the last radio transmission we heard for the next 20 seconds. Time compression is a beautiful thing when you need a lot of information quickly.

As we rotated from the flight deck, the pilot called, "I've got it, fourteen units," as the plane did a slow wing rock.

As the RIO glanced at the airspeed indicator, we had reduced our 132-knot, on-speed approach down to 120 knots and 110 feet of altitude, with only the left engine on line.

As the pilot called again, "I've got it; here comes the gear," the RIO responded, "One hundred feet, eighty feet, blower." (The afterburner was already engaged.)

At that point, the RIO had made up his mind that if we reached 60 feet with a negative VSI indication, or any wing rock past 15 degrees, we would eject. But we hung at 80 feet for the next 15 seconds. The pilot kept bunting the nose to keep the plane at 14 units, not a whole lot of fun, especially with one motor and 117 knots.

Slowly, the aircraft started gaining altitude. From the time we bolted to establishing a climb, we had yawed 65 degrees off heading.

As we climbed, the pilot checked the hydraulics and confirmed the right engine was shut down and the fuel handle pulled. Passing 45,000 feet, we made an easy 20-degree jink to the right to start heading for our divert and pushed the fuel-dump circuit breaker back in to get both fuel systems working for us. At first, we could not understand why the plane wouldn't accelerate past 200 knots. By this time, our CO came up on the radio and re-caged our brains. He asked if the flaps were up...or not. (Ooops!)


We broke out the single-engine bingo charts (we were glad we'd made sure we got the right ones) and started flying the profile. Our fuel split was still there at 4.0 on the left, 2.8 on the right. For a 110-mile divert, we

Time compression is a beautiful thing when you need a lot of information quickly.

to hold the stick where I want it. Also, without DLC, we're going to be slower, which translates to being a little bit further back on the power than normal."

We turned to final bearing and got ACLS needles. The pilot had his hands full as the plane wallowed back and forth. We had briefed a self-contained approach backup with the RIO calling high or low glide-slope deviations at

Continued on page 24

A photograph of three military helicopters flying in formation against a sunset sky. The helicopters are arranged in a delta pattern, with one in the foreground and two behind it. The sky is a mix of orange, yellow, and blue. The title 'ACM in the Landing Pattern?' is overlaid in large red text on the right side of the image.

# ACM in the Landing Pattern?

*by Capt. William Bentley*

**W**e were off the coast of a foreign country, knee-deep in an exercise. We had launched into the overhead delta pattern, anticipating the assault involving three waves and 10 aircraft.

After 30 minutes, three Phrogs were scheduled to lift off. Dash 1 was preparing to launch when I first saw another aircraft. From 1,000 feet, I knew it was a helicopter, but that was all I could tell. I stared at it for a couple of seconds and realized it had a desert paint scheme and was not one of ours. He was coming in from the right and at the same altitude as the H-46s.

The intruder looked like a Puma, and we called the Boss over the tower frequency more to let everyone know than to tell him. The Boss finally saw the threat, which we now knew to be an Egyptian Hip.

The Hip kept coming, splitting Dash 2 and Dash 3 at their altitude. The interval between the two Marine helos was mere seconds.

The Hip flew down the port side at 300 feet, starting a slow turn to come back up the starboard side. He certainly gave the two Cobras in starboard delta something to look at.

We kept updating his position to the Boss and the other aircraft in the pattern, two in starboard delta, and three in port. The Egyptian helo went back feet dry, never having talked to anyone in spite of the boss's efforts to raise him. We continued with the insert, paying much closer attention to our surroundings.

We thought we were safe under the Boss's control, but we were wrong. Always keep an eye out for traffic, especially in foreign countries. 🦅

Capt. Bentley flies with HMH-464.

# Coach Was Right

by Lt. Derek Fleck

Before my first high-school varsity basketball game, our coach pulled me aside, noted the sweat pouring from my brow and said, “You’re going to be under a lot of stress tonight, but don’t ever forget: When the pressure is on, confidence is key.” With that stirring pep talk, we promptly went out and got destroyed. I got yanked from the game in the third quarter, but I never forgot what my coach told me, and it’s a lesson that I believe applies in the cockpit. I learned that lesson the hard way in an SH-60B as a copilot on a dark night in the Caribbean Sea.

Our crew was returning from a fruitless counter-narcotics patrol. I was in the right seat for the first time in a week. I was quickly back in the groove of flying. My confidence was further boosted by the fact that I’d made five night approaches and 25 night deck landings on a DLQ proficiency hop earlier in the night.

My initial descent from altitude to the final approach course was uneventful, but my three-hour daze was broken at the one-mile mark when I realized we were in heavy rain. I squinted to find the lights of the flight deck.

We were maintaining a very methodical NATOPS approach when I noticed the master-caution warning light come on at 0.2 DME. The radar altimeter began waving its indicator back and forth like an evil finger, and the low-altitude warning lights flashed to the rhythm of the aural tone that beeped incessantly.

Radar-altitude hold had failed, and despite the fact that we were at the exact point we should have been taking over the approach visually, the distractions had put us off lineup and below glide slope.

Troubleshooting and communicating had interrupted the normal closure and altitude calls from the aircraft commander and sensor operator. The loss of altitude-hold had turned what was essentially a two-dimensional approach (closure and lineup) into a three-dimensional approach. That third dimension—altitude—was giving me the biggest problem. My eyes focused on the ship glide-slope indicator (SGSI), which displayed a bright, red light indicating I was below glide slope.

We pulled power and waved off the approach, turning for downwind and climbing instantly to 800 feet. We followed the NATOPS procedures directing us to reset any advisory lights, cycle the AFCS computer power and check for popped circuit breakers. NATOPS was especially helpful with its last step of “land as soon as practical,” which had been our goal all along.

After our fourth attempt to cycle computer power in straight and level flight, the radar altimeter ceased its manic movements, the AFCS advisory cube disappeared and we switched from barometric-altitude hold to radar-altitude hold.

My confidence was shaken. After making my first night shipboard waveoff, I was struggling to focus on flying instruments. I passed through the downwind course once and finally regained my orientation.

The next two passes were similar to the first, with the additional annoyance of losing SAS2, trim and autopilot, and thus, any type of altitude-hold.

On the second approach, we got slow and low as we approached the fantail, and on the third approach, we found ourselves uncomfortably high and fast as we closed the ship (antennas well in view).

Unfortunately, between the disorienting slow flight on the second pass and two AFCS-off waveoffs, the HAC and I had developed vertigo. I began to feel as if I had reverted to that sophomore basketball player, who had just



been yanked and was staring at the ugly scoreboard. The main difference nine years later was that I was in a helicopter flying over water, and couldn't just take a seat on the bench to watch from the sidelines.

The reality was that two pilots were having a rough night, with constant aircraft problems and tough weather. Because of the bad weather, the transition from instrument to visual flight near the back of the ship demanded close crew coordination. During the first three approaches, warning lights and aural tones, not to mention an immediate change in flight-control response, was affecting crew coordination. Furthermore, the sensor operator's altitude calls from the back were more of a hindrance than a help. Every time the radar altimeter kicked off, his barometric-altimeter readings didn't correlate to the visual picture.

Because we were flying single-ship operations far from the beach, we knew that with just under 1,000 pounds remaining, we still had a few passes left before we would be fuel critical.

The ship couldn't find a break in the storm, so we began discussing how to best set the cockpit for our next approach. We decided that with the rough night we were having, it would be wise to have some type of working altitude hold. We opted to try the system that hadn't failed us in the three hours before recovery (we'd been working at altitude) and hadn't been associated with an AFCS failure—the barometric-altimeter hold.

We switched altitude-hold functions and discussed the need to wave off as soon as we saw an AFCS-degraded light. If we did get another, we briefed that the non-flying pilot would focus on backing up the PAC's instrument scan during the waveoff in case he got vertigo. We also briefed the sensor operator to stop his altitude calls once we called

that we were visual on the approach. I finally felt some confidence creeping back into the cockpit.

The next approach went according to plan, despite the fact that the DME indicator couldn't tick down quickly enough for anybody. With the rain and wind trying to push us off course, we crossed the .2 DME mark on lineup and glide slope. Without any altimeter hold or AFCS failures, we routinely took over a visual approach and continued to an uneventful landing. I uncrossed my fingers and toes and let out a sigh of relief. There was silence in the cockpit while we listened to the beautiful sounds of chocks being attached to the helicopter.

The radios crackled with the voice of the ship's HCO.

"I don't know what your problem was on those first few approaches. That last approach didn't look very hard. You guys should have done your first ones like that last approach."

I was about to reply, but just turned the radios off as we continued our shutdown checklist.

Maintenance inspections revealed that a sensor input to the radar altimeter had a dead spot corresponding to a power setting that we reached at certain points in our approach, causing the altimeter failures. There was no explanation for the loss of SAS2, trim and autopilot, but the mechs changed an AFCS computer, and the problem never resurfaced.

That night, unable to fall asleep, I thought about the importance of a vigilant instrument scan, solid basic air work and crew coordination. Our crew made small mistakes in all these areas during our first three approaches on a night when we couldn't afford them. It took a high level of proficiency in those areas to yield our successful final approach.

I also thought about cases where NATOPS doesn't provide much guidance; the crew's system knowledge and troubleshooting ability may offer the best solution.

I then began questioning the role confidence played in our near-fiasco. Any moonless approach to a small-boat is a difficult situation, no matter how many times you have done it, and when you approach it with overconfidence or a lack of focus, you are just asking for problems. On the flip side, the time to question the confidence in your years of flight training and experience isn't after you've suffered a setback; that's the time you are going to need it the most.

I think my coach was right. "Confidence is key," but in aviation, unlike many other occupations, too much or a lack of confidence can not be corrected by being yanked from the game. When you fly a helicopter, you're required to remain attached to it to survive. Personal levels of confidence are only worth what you have learned to back it up: Knowledge of that helicopter, its systems and the ability to fly it. 🦅

Lt. Fleck flies with HSL-46.

We were maintaining a very methodical NATOPS approach when I noticed the master-caution warning light come on at .2 DME.

by Lt. Dan Truckenbrod

It was going to be a great day. I was a fresh tie-cutter at VT-3. Having completed my first solo flight in a T-34C and a couple of the precision-landing-and-aerobatics flights with an instructor, it was time to strap on a Mentor and have a blast during my second solo. I really wanted to fly.

“What a great deal, this flight-school thing,” I thought as I pulled through the gates north of Milton. Only a small bit of disappointment in the form of overhead puffy clouds loomed in the Florida skies. It still looked promising that I would meet the weather minimums in the Red Knight SOP for student solos.

After a thorough brief with the flight-duty officer through the student-instructor sliding-glass barricade, I sat down to log another 15 minutes in the infamous blue chairs to relax and review my course-rules procedures. We had discussed the potential of a weather CNX because of the lower cloud ceiling rolling in from the west. I kept peeking out the window to see what Mother Nature had in store for me. I decided I should walk plenty early, intending to take off before the next declining weather brief.

Out the door and to the bird for a thorough preflight I went. I recited preflight identification items usually reserved for the early FAM stage. When I finished the external preflight, I threw on my SV-2, climbed up the wing, and strapped on the parachute. I gave the line attendant a glance and started up, called for taxi, and started rolling. Certainly I was free to go now as I looked up toward the iffy weather conditions.

I had made it about 50 yards out of the line when a call came from tower: Red Knight base said to return. How-

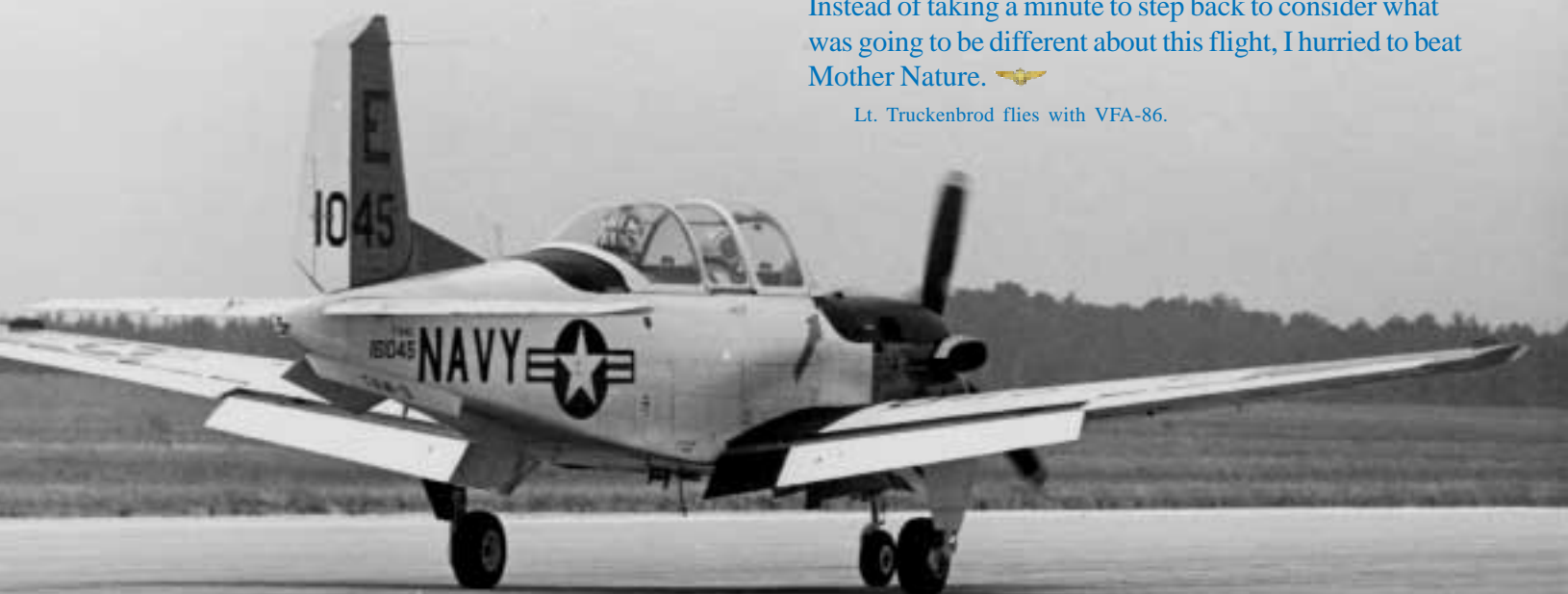
ever much I didn’t like that decision at the time, the FDO had shown sound judgment. Back to the line I went. I parked and shut down. I gathered my gear, stepped out of the cockpit onto the wing toward the aft cockpit to unsecure the parachute. To prevent the T-34’s aft parachute from falling forward and obstructing the stick during solo flight, you have to secure it with the harness restraining straps. I walked down the wing. My heart started racing as I discovered the parachute cooperatively leaning against the seat back unsecured. I let out my best Homer Simpson “Doalf!” and I scanned the line for any IP who was sure to discover my blatant error and reward me with a pink sheet. None. Whew!

Back in the shack, the FDO apologized for having to bring me back. Under my breath, I thanked him a hundred times. Thoughts of me and a T-34C scattered over south Alabama dominated the rest of my day. It would not have been the first mishap investigation to uncover a rear-cockpit parachute lodged against the control stick. I kicked myself over the carelessness that could have cost me my life. Reviewing the conditions, I came up with some lessons to take with me that day.

Why didn’t I complete a standard NATOPS preflight? First, in my haste to get through the program and on to the next phase of training, I had developed a form of get-home-itus: get-your-good-deal-solo-today-itus. Of course, I was dying to take Dad’s orange-and-white sportster out by myself. Somehow, tomorrow was not acceptable.

Second, I was up against probably the most challenging aspect to a creature of habit—a pattern change. There is usually a body in the back seat to strap into the parachute. Instead of taking a minute to step back to consider what was going to be different about this flight, I hurried to beat Mother Nature. 🦅

Lt. Truckenbrod flies with VFA-86.



# Bad Weather—Just in Time



Stop the madness



[www.safetycenter.navy.mil](http://www.safetycenter.navy.mil)

# Tear out this poster & newsletter!

## Milestones

Command	Date	Class A Mishap-free Flight Hours	Years
VFA-146	07/15/99	58,000	14
VAQ-130	07/25/99	31,800	18
VAW-126	08/01/99	14,000	7
VFA-27	08/12/99	51,000	13
VAW-115	08/17/99	31,200	14
VRC-30	08/23/99	70,400	16
VF-211	09/02/99	49,000	13

## Class A Mishaps

The following Navy and Marine Corps Class A flight and flight related mishaps occurred since 30 June.

Aircraft	Date	Command	Fatalities
AH-1W	07/30/99	HMLA-267	0
A Sea Cobra collided with the ground and rolled onto its side.			
F-14B	08/04/99	VF-101	0
A Tomcat hit the ramp during night CV quals, FODed an engine, and collapsed the starboard MLG.			
AV-8B	08/30/99	VX-9	1
A Harrier crashed into terrain.			
UH-3H	09/16/99	VC-8	0
A Sea King crashed into the ground during a BQM mission.			

## Class A Flight Mishaps Rate

	FY99* thru	7/15/99	FY99* thru	7/15/99
	No.	Rate	No.	Rate
Navy/Marine	22	1.50	34	2.33
All Navy	9	0.80	25	2.24
All Marine	13	3.77	9	2.62
NAVAIRLANT	4	1.36	10	3.34
NAVAIRPAC	3	0.98	7	2.26
MARFORLANT	2	1.66	3	2.67
MARFORPAC	11	6.91	6	3.71
NATRACOM	2	0.54	5	1.41
NAVAIRRES	0	0.00	0	0.00
4thMAW	0	0.00	0	0.00
NAVAIRSYSCOM	0	0.00	2	6.23
NAVSTKWARCEN	0	0.00	1	12.91



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# POP-UP

## Painting Hornet Launch Bars

During a day CQ launch the catapult crew identified a launch bar that was not painted correctly and suspended the launch. A subsequent inspection of squadron aircraft found four other launch bars that were painted wrong, some of which had been used numerous times during the squadron's recent deployment. One of the launch bars was painted upside down, while the others had only minor discrepancies.

The launch-bar paint scheme is normally painted at O- or I-level as directed in AYC-1111, and was developed after a mispositioned launch bar resulted in the loss of a Hornet.

A number of safeguards should have identified this discrepancy before this event. The controls were in place, that addressed the launch-bar mispositioning problem, but the supervision wasn't strong enough. Control the risks.



Mispositioned Tensioned  
Launch Bar



## Push-Pull GLOC

Two pilots were flying a training sortie in a T-34C. During a briefed maneuver, they both experienced a G-induced loss of consciousness at about the same time.

They had been practicing an inverted flight maneuver and were established at 7,500 feet MSL and 150 KIAS. The IUT in the front cockpit started the maneuver by pulling up 15 degrees, then rolling right to an inverted position and slight negative G.

The IP, who was closely monitoring the maneuver, noticed that five seconds after the start of the maneuver, the aircraft was descending with about a 30-degree nose-low attitude. Recognizing a bad situation, the IUT told the IP, "This isn't working, I'm going to recover."

The last thing the IP remembered was an increase in positive G, 60-degrees nose-low, at 220 KIAS.

The IUT began recovering from the maneuver by rolling wings level toward the horizon. The last thing he recalled was a 30-degree, nose-low attitude, upright, five-degrees right-wing down, and the nose tracking to the horizon.

The next thing either pilot remembered was the aircraft in a 15-degree, nose-high, upright attitude, 25 degrees right-wing down, but still climbing.

Both pilots realized they had experienced GLOC even though the G-meter showed only 5.2 G's.

The commanding officer (who was the IP in this incident) stated in the hazard re-

port, " Our briefed maneuver was not associated with the physiological phenomenon of push-pull GLOC (i.e., rapidly going from negative to positive G). Adherence to the briefed altitude, airspeed and trim criteria for setting up the demonstration was key to the outcome of this flight. The aircraft completed recovery without pilot input."

Cdr. Gary Gregory, a physiologist attached to the Aeromedical Department of the Naval Safety Center, offers this explanation of decreased G-tolerance associated with the push-pull phenomenon and GLOC.

A possible scenario: Exposure to less than 1 G activates reflexes that protect the brain from increases in blood pressure and oversupply of blood. Specifically, the heart rate slows, the stroke volume decreases and peripheral blood vessels can dilate to reduce the blood supply to the brain.

Transition to positive G shifts the blood away from the brain and head, requiring the initiation of opposing reflexes, which are activated to preserve the cerebral blood supply. When the transition from negative to positive G happens too rapidly, compensating reflexes can not "spool up" in time to offset the changes induced by the exposure to negative G.

Studies suggest that exposures to negative G (between 0 to -1G) for as short as 2 seconds can reduce tolerance by as much as 1.5G during subsequent "pulls" to positive G.

# ORM

(Operational Risk Management)



The method to sto

# Rings Are Dangerous!

by Ltjg. Tom Pham

When I was a plebe at Annapolis, one of the menial tasks my classmates and I had to do for the company was to recycle newspapers and aluminum cans. That may sound like harmless light duty, and it is, if you use common sense. Without common sense, any job can soon become dangerous.

Did you know that you could lose a finger over something as harmless as recycling cans? I knew a shipmate who did. This mishap could have easily been prevented if she had thought to do one thing before she decided to hop down off the recycling bin ladder. What did she forget? For all you faithfully married guys and gals, you know what I am talking about, that shiny gold band on your left hand. On her way down the ladder, her ring snagged one of the bars, stripping off all of the skin and muscle on her ring finger, right down to the bone! Her finger could not be saved and had to be amputated.

Every aviator has been told hundreds of times about not wearing rings when they walk to the aircraft. We know that a wedding band or class ring can get caught on the boarding ladder or come off and FOD an engine. The concept of not wearing rings applies not only to flight crews, but also to anyone working around aircraft, on board ship, or operating machinery of any kind.



Recently, a troubleshooter in my squadron had gotten his ring hung up on my EA-6B's boarding ladder. Watching this mishap made me remember the shipmate who lost her finger when I was at "Boat School." I never got a chance to prevent either incident. I didn't witness the Annapolis mishap, but for the troubleshooter incident, I should have seen the hazard and said something.

After witnessing the troubleshooter snagging his finger on the ladder, I thought about how I did not do a good job of taking care of one of my troops that day. I did not make him take off his ring, and I did not take the time to confront him about it later. I didn't do him, his family, or the squadron any good. Being the new guy in my squadron, I was reluctant to take action. I was so focused on my flight and my own safety that I did not stop to think that the people who work on my jet risk injuring themselves as well. The troubleshooter didn't lose a finger and was not seriously hurt. However, he could have, just like my classmate.

Everyone should remove rings and jewelry when there is a risk of getting them caught on something like a ladder or machinery. Believe me, your loved one will understand why you have to take off your ring. 🦅

Ltjg. Pham is an ECMO with VAQ-132.

# No-Flap Approach

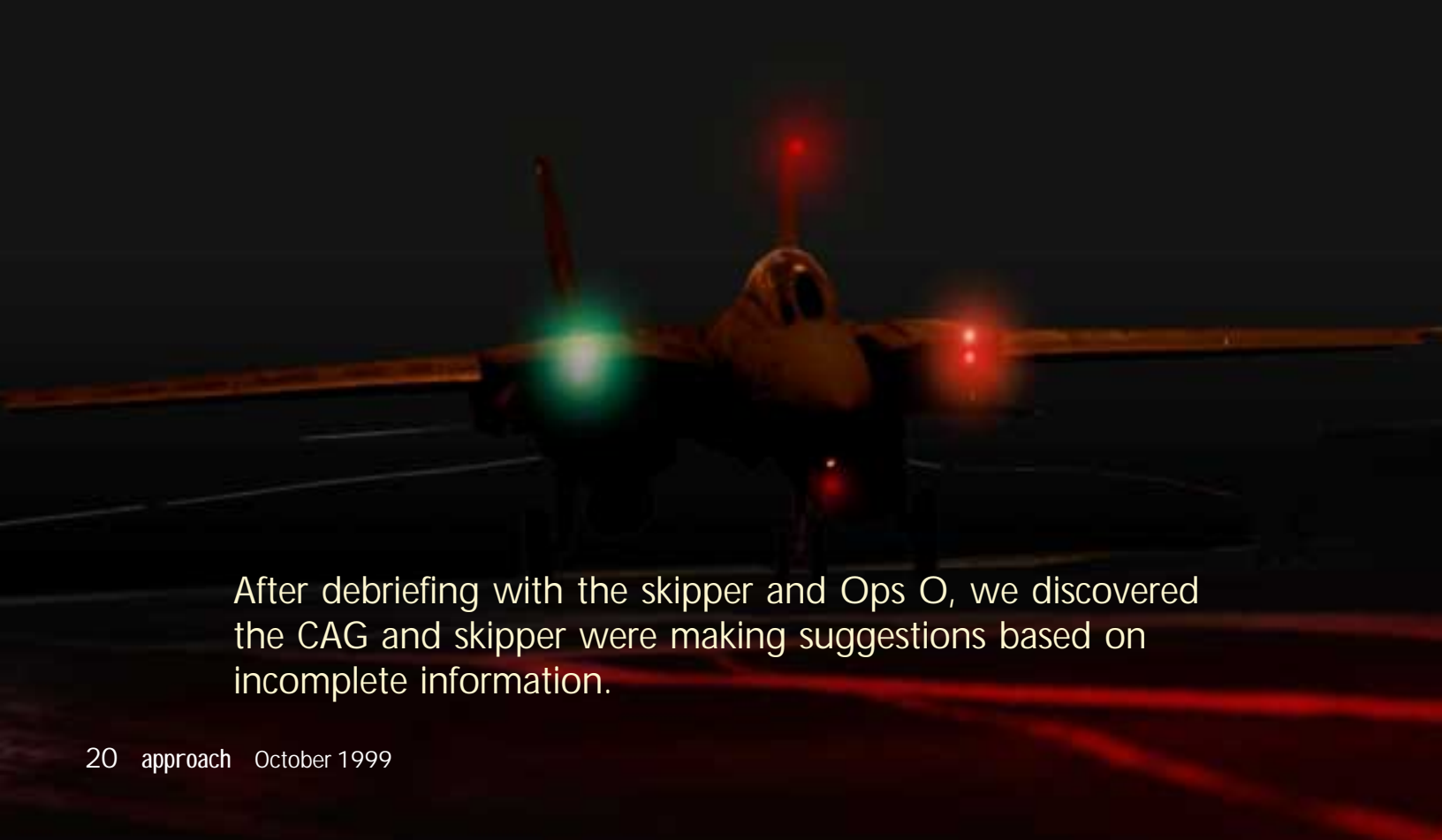
by Lt. George Michaels

The night couldn't have been brighter. The moon was full, and the sky was clear over the western Pacific. We briefed a section NVD fam hop for my pilot and read the ADB for aircraft 101. We didn't see anything major, but there was an up-gripe about requiring extra lateral trim to stay wings level in the dirty configuration. We'd both seen this problem before, so we suited up and headed to the flight deck for the hot-switch.

The NVD training portion of the flight was uneventful. We did our formation, rendezvous, and 1 v 1 intercepts using the new AN/AVS-9 NVGs. It was so bright we could have flown lights-out formation without the goggles. Once the training goals were met, we split the section and proceeded toward marshal for the Case III recovery.

The flight deck had been somewhat slow over the last few days, so we decided to save extra gas and planned on calling the ball with max-trap fuel. Hong Kong International was 200 miles away and was to be used for emergencies only, so we were working under blue-water operations. The marshal process went without a hitch, and we began our approach on time. CATTC instructed us to dirty up at 10 miles.

After my pilot lowered the flaps and slowed the aircraft to on-speed, he reported a slight left roll and a lot of right yaw. It required a lot of right-wing down and left-rudder trim to stay wings level. He flew with it for a couple of miles and



After debriefing with the skipper and Ops O, we discovered the CAG and skipper were making suggestions based on incomplete information.

decided it wasn't that big a deal, and we continued the approach. The ACLS tadpole popped up at five miles and, despite the extra effort to stay wings level, the approach was text book. Unfortunately, it ended with a foul-deck waveoff, so we climbed to 1,200 feet and turned downwind. We didn't mind so much since it was such a nice night.

Once on the downwind, my pilot suggested we cycle the flaps to try to cure the roll-off. Perhaps the aux flaps were mismatched or not fully deployed. It didn't seem unreasonable, so I agreed. The flaps came up. The pilot then lowered them again, and as we slowed through 150 knots, I felt the jet roll off to the left even more than before. It was bright enough to see the flaps unaided, so I looked right, then left. The right side was fine, but, to my dismay, I saw a large piece of what appeared to be the flap sticking straight up from the outboard end of the left wing. It was obvious my pilot was fighting the roll-off, so I told him not to touch anything and climb straight ahead if he could stay wings level.

After describing what I saw, we decided to climb to 10,000 feet and check things out. I told CATTC we had a problem and would continue downwind, climbing to 10,000 feet. I also asked for a rep on button one. The Ops O answered, and I described our problem as we continued our climb and steered to a point 15 miles south of the ship. It appeared our outboard, left flap panel had broken free of the two inboard actuator points and was sticking straight up, held on only by the outboard hinge.

I considered our options and our fuel state. Once we reached 10,000 feet, the pilot began to slow-flight the aircraft. He decided he would not be able to safely land aboard the ship, nor would he be able to tank because of the significant roll-off. Our fuel state was now 5.5, not enough to get us to a divert in our current configuration. Our only real option was to get rid of the errant flap, or we would have to prepare for a barricade recovery.

We tried to shake the flap loose within the controllability limits of the aircraft, to no avail. We quickly decided we would raise the flaps to try to break off the flap. We asked our rep, who had been joined by CAG and skipper, for their concurrence, although we decided we would raise the flaps whether they agreed or not. They concurred, and the pilot proceeded to raise the flaps incrementally as I monitored their movement.

On the second increment, I looked right, then left, and the flap was gone. He raised the flaps the rest of the way, and the aircraft instantly smoothed out with the flaps in the full-up position. I could hear the sigh of relief from everyone and felt the huge weight come off our shoulders,


During this time, we failed to closely monitor our range to the ship and found ourselves 24 miles away, but still on a wide downwind. Our fuel was now 4.5, just enough for one approach before reaching tank fuel. However, tanking would now not be a problem.

CATTC vectored us in for the no-flap approach. After reporting our approach speed and gross weight, we started the uneventful approach, ending with an OK underlined 1-wire.

After shutdown, we inspected the wing and found that the entire outboard flap panel was gone. The actuator attachment points had broken off, and the flap had been hanging by the outboard point. Bringing the flaps back up had broken it off.

There is no F-14 NATOPS procedure for a detached flap, but there is for uncommanded roll. The first step is to return the flap handle to the previous position if the roll occurred during a flap transition. The roll didn't actually become significant until the flaps were down for a while and the aircraft was slowed to on-speed. Even then, the pilot said it was manageable for the approach. I wasn't sure what raising the flaps would do, and the aircraft was controllable at the time. If we had raised the flaps then, they would probably have come off, but I might not have had the opportunity to see the flap panel before it came off.

We also let ourselves get too far away from the ship. We weren't critically low on fuel, but as every aviator knows, you can never have too much. After debriefing with the skipper and Ops O, we discovered the CAG and skipper were making suggestions based on incomplete information. When they walked into CATTC, the emergency was already in progress, and in the scramble to get caught up, they didn't get the full story and didn't realize that the entire flap panel was hanging off, which highlighted the need for accurate information. Ultimate responsibility for the aircraft rests with the crew. However, if the people aboard the ship had made decisions based on erroneous information, the consequences could have been severe.

Could we have done anything differently? If we had followed NATOPS by the book, we may have had a hanging flap behind the boat on the approach instead of downwind, or we may not even have known the flap panel had fallen off. NATOPS can't cover every contingency, so a cool head, sound decisions and a thorough knowledge of aircraft systems are essential. Our crew coordination and quick assessment of what we wanted to do worked for us that night and, as always, we learned from our mistakes and won't repeat them. 

Lt. Michaels flies with VF-31.

by LCdr Ron Fry

**F**y long enough and you will eventually have a low-fuel story. I remember hearing the old guys ask each other, “What’s the lowest you’ve seen on your fuel gauge?” Now I’m one of those guys, and I can remember at least four times when my fuel state had me worried. One got me mad, one got me scared, and the others did neither because I had learned from the first two.

The first incident occurred on a cross-country. It was a long leg from our first fuel stop, but we had done it plenty of times in our SH-2F, so I didn’t figure fuel would become a problem. We had filed an IFR flight plan that brought us in from the north to our destination, and planned to cancel IFR and pick up the VFR helo route. We had all the necessary charts and planned the route

well enough to know we had fuel. But as a friend of mine liked to remind me, “Custer had a plan, too.”

Winds and fuel-burn rates don’t always come out the way you figured, and by the time we were ready to cancel IFR, we knew we had better continue with the filed plan and go straight to our destination.

We had enough fuel to land with our required 20-minute reserve plus another 10 minutes, and the weather was clear, so I wasn’t worried. Then the controller tried to direct us well out of our way, and the whole thing got messy.

I replied “Negative, minimum fuel,” hoping the controller would let me continue straight to my destination, but he wanted none of it. My impression was that flight

# Old Guys Need Fuel, Too



controllers have no idea what “minimum fuel” meant. He asked, “Are you declaring an emergency?”

I replied, “Negative, I am declaring minimum fuel, meaning I cannot accept undue delay to my destination.” We discussed my fuel state, and I finally convinced him to let me proceed direct (at a lower altitude to clear his airspace) to my destination. Upon landing, I was told to call the number of the local FAA rep, who interrogated me as to whether I had landed below my minimum-fuel requirements. I hadn’t, and I gave my interrogator a lesson in 3710.7 and the difference between minimum fuel and emergency fuel.

My second incident occurred on a return cross-country night flight to home field. Along our route, we picked up stiff headwinds, but we figured we still had enough fuel to make it home. We kept an eye on the gas, and soon we were looking for a divert field where we might get gas before heading across the Chesapeake Bay. Better safe than sorry. Problem was, there was no place, though looking back now we probably could have done a night landing to an uncontrolled field and called home guard for a fuel truck. We still figured we had enough to get across the bay.

About halfway across, we had enough serious doubts that we went through the emergency ditch checklist and got the rafts ready. We landed a few miles short of home field, touching down at a nearby Air Force base with 125 pounds on the fuel gauge at shutdown. Talk about feeling stupid.

I am proud to say that I have learned from those early mistakes. Months later, on another cross-country, I calculated we were behind our fuel schedule fairly early. I contacted a Coast Guard field along our route and asked for permission to land and refuel. The SDO replied I couldn’t, because I didn’t have a PPR. Fortunately, my copilot recognized the guy’s voice as a fellow pilot from his VT days, introduced himself on the

radio, and what do you know, we got permission. So much for PPRs.

On another dark night, heading south toward home field, I compared our planned fuel and our actual fuel as we passed another NAS. To my dismay, we were behind. Not to fall into the same trap twice, I contacted the air station’s base ops and asked for permission to land and refuel. Like my previous incident, I had to explain to the duty officer that no, I did not have an emergency, but if I didn’t get fuel now, I might have an emergency later.

There are several lessons here. Never trust your default burn rate. Always establish estimated fuel remaining at various checkpoints on your route so you can divert early if necessary. Never take “No” for an answer from weekend duty officers. I also make it a point to break my cross-countries into shorter legs if I am expecting weather below VFR mins at my destination. That 10 percent we allow to get to our alternate doesn’t make it, if you ask me. Three hundred pounds might get me to another nearby field, but the weather will probably be the same. I want enough fuel to a VFR field. But that’s me.

Old guys get that way. 🦅

LCdr. Fry flew H-2s with HSL-32. He now flies SH-60Bs with HSL-42.

We had all the necessary charts and planned the route well enough to know we had fuel. But as a friend of mine liked to remind me, “Custer had a plan, too.”

## Saving the Day Over the Gulf Continued from page 10.

needed 3.6 with an almost negligible headwind (15 knots). At least if the fuel transfer became a problem, we had enough on the working engine's side to make it.

Our lead waved off behind us to escort us to the divert field. We handed our lead the comms as we set about getting through the myriad checklists for a single-engine divert.

We couldn't transfer the fuel from the right side to the left. We were also suffering from time compression. The RIO set his watch when we tried to transfer the fuel and gave the system a good seven minutes (it felt more like 30 seconds) before it became evident that the right side was not decreasing. We felt we had plenty on the left side to make the field, and other items demanded our attention, so the fuel-transfer switch went back to the left side and stayed there. At least the amount wasn't increasing as it would in a fuel-migration situation.

Yet another problem soon reared its head. At the ship, the winds were light, but as we approached the coast they became a 75-knot headwind at 13,000 feet. We were not sure exactly how that would affect our fuel, but at this point our box was getting really small. We could not go back to the ship and only had the fuel on the left side. Our divert was the closest field available. It was all or nothing.

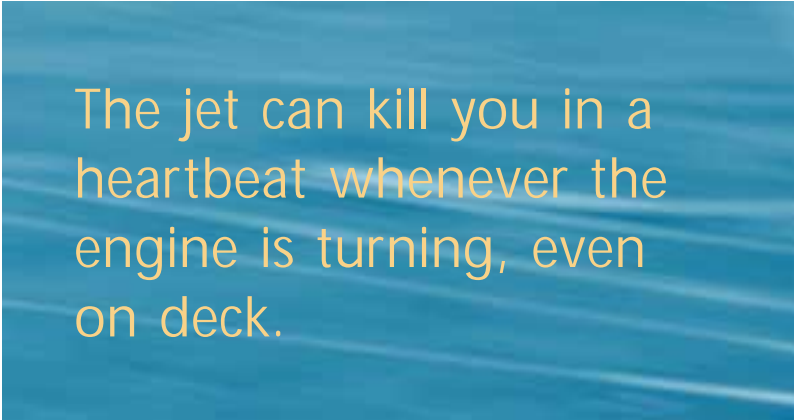
Our escort had done a good job coordinating efforts to recover with an arrested landing at the divert, and we were ready to take over the communications once we started talking to tower. The game plan was to jink a little to the right to set up for a straight-in. If we had a hook skip, we would leave the jet on the runway because it would be too hard to fly away and because we didn't have much gas remaining on the left side. If a tire blew during braking, we would shut down the left engine and stay with the jet. The approach went smoothly, and we entered a left downwind to an uneventful arrested landing.

Everyone talks about single engine off the cat, but what about a bolter? In our case, the fuel-control unit stopped working, thereby starving the engine of gas. We estimate the engine quit eight seconds before the ramp. Quick reaction by the pilot to feed in rudder, get the gear up, and stroke blower saved the jet.

We landed at the divert field with 900 pounds on the left side. With all things being equal, the bingo profile should have had us land with 2.2 on the left side since

the bingo profile includes a 2.0 reserve. Weather had called for the winds to remain light at all altitudes. However, with a 60-knot increase in headwind combined with the extra distance to set up for a straight-in, those factors made us burn an extra thousand pounds of fuel.

A lesson that needs to be learned over and over is to not let your guard down. The jet can kill you in a heartbeat whenever the engine is turning, even on deck. You have to be ready for anything. In our case, no stall-warning tones or lights ever came on. Also, the engine quit, or more specifically, the fuel-control unit quit, at the worst possible



The jet can kill you in a heartbeat whenever the engine is turning, even on deck.

point—right behind the boat at 150 feet. Scanning the engine instruments, 10 seconds before touchdown is not included in “meatball, lineup, angle of attack.”

NATOPS checks and simulators are valuable tools. As we bolted, both of us were exchanging information. We didn't hear any of the outside communications directed at us. We were so focused on climbing away that any advice on the radio went unheard, even the calls to eject.

When you have a lot of things to do, it's worth the time to sit back for a moment, prioritize your actions, and complete one task before starting another, ensuring no checklist item is forgotten. Use your wingman to coordinate what you want to do, and, likewise, don't be afraid to tell him to get out of your cockpit.

When the busy day was over, the two jets and four crewmen were safe on deck at the divert field, where we enjoyed a free meal in Kuwait. Good training and quick reactions by the pilot saved the day. 🦅

Lt. Cushman and Lt. Baxter are first-tour RIO and pilot, respectively, with VF-154.

# But I Thought You Did It!

by LCdr. Dave Rymer

We were preparing for a night launch. The flight was no surprise; we had known about it all day and felt we were ready. We were rested, briefed and confident. Both of us were first-tour lieutenants with plenty of respect for moonless nights, but our respect was diluted by JO fearlessness. This was just another night patrol flight in the northern Red Sea, or so we thought. The cover of darkness turned out to be our undoing. A simple omission, easily recognized by anyone during the day, made this hop a quick one.

We had been on alert for hours and knew the aircraft was ready for flight. All that remained was to remove the intake and exhaust plugs, ESM antenna covers, and pitot-tube covers.

Upon hearing flight quarters set, I jumped into the left seat and began to initialize the tactical display while the HAC finished the preflight. Satisfied the aircraft was safe for flight, the HAC strapped into the right seat and called for the alert checklist. We got a green deck for launch. The winds were from port, so as the rightseater, I would make the takeoff.

Following the departure from a hover aft of the flight deck, I noted an increase in power and three rates of climb.

I announced over the ICS, "Three rates of climb ... no airspeed ... no airspeed...still...no airspeed."

Our nose attitude was a few degrees down, and the aircraft was definitely climbing. I selected Doppler mode on the mode-select panel and 42 knots ground speed flicked into view. There could only be one cause.

"The pitot covers are still on!" I said. The HAC instantly reported to deck, "We need to come back." The

recovery went smoothly despite the moonless conditions. We were only slightly degraded without the pitot static-airspeed indicators because we could still get ground-speed data on the bearing distant heading indicator (BDHI) and multi-purpose display (MPD).

After we landed aboard mother, the plane captain confirmed what we already knew: The pitot-tube covers had been left in place.

When the flight crew and flight-deck personnel debriefed this episode, we determined that the "A" word was to blame. You know the phrase: When you assume something it makes an... That's exactly what happened this night. While all of the plugs and covers were being removed, the HAC was helping to speed up the removal. He wanted to verify everything was removed before strapping in. Unfortunately, while he was helping the plane captain remove the ESM antenna covers, they each thought the other was going to remove the pitot-tube covers next. That assumption, combined with the darkness, led to us launching with both pitot-tube covers still in place. Neither the LSO, HCO, nor the plane captain noticed these covers during aircraft startup and takeoff.

We learned some valuable lessons that night. Don't make assumptions about the aircraft configuration. If you don't see something removed, it isn't removed. When you're preparing for a night launch, your visual inspection of the exterior of the aircraft is the last chance to correct discrepancies. The darkness will virtually cancel out the chances that flight-deck crews or supervisory personnel will observe deviations that would be obvious during the day. 🦅

LCdr. Rymer flew with HSL-48. He is now with VT-6.



# Chiefs Always Take Care of JOs

by Ltjg. Leonard Hennessy

It was a cool fall evening aboard USS *Dwight D. Eisenhower*, and CVW-17 was more than half way through its '98 Med cruise. We had been operating in the Adriatic Sea, and the air wing kept busy with long days filled with sorties over hostile territory. Being the new guy in my Prowler crew, it was usually my job after recovery to hike down to CVIC to debrief the intelligence staff on the mission we had just flown. It's usually no big deal.

On *Ike*, the Prowlers were usually parked by cat 1. The trek from the aircraft to CVIC was an obstacle course of deck chains, bombs, hoses, missiles, cables, jet-wash, prop-wash, and, of course, parked aircraft (not to mention that you often had to do it at night). Again, this hike was routine; you just had to be careful. As for me, I took it slow across the flight deck, trying to see and avoid the things that could ruin my beautiful fall day at sea.

To get to CVIC, you have to get to the starboard side of the ship, outboard of the island, go down a ladder to the O-3 level, and then start moving forward.

A good rule to remember is that everything on the flight deck is a threat, even if you can't see it. Walking through an F-14's exhaust, even at a safe distance, seems like walking through hell. But sometimes, the stationary objects can be the most threatening, especially at night when you notice movement before actually seeing something.

Sailors have walked into the razor-like trailing edge of a Hornet's wing in the dark without a cranial, ending up with a long, red stripe or even a cut across their forehead, and become walking poster children for wearing the ugliest piece of headgear ever devised.

On this autumn night, I headed toward CVIC, picking my way through FA-18s. Generally, most aircraft have their wings folded unless they're being worked on. Where the FA-18's wing unfold, the aileron and flap leave virtually no gap and have strong, thin, razor-sharp edges between them.

I approached a Hornet from behind and decided to go left to get around it. Since I was heading toward the island from the bow, I saw the aircraft's silhouette against the island's floodlight and my depth perception was greatly reduced. I simply couldn't see the trailing edge of the wing. Knowing that all the aircraft were tied down, but not actually being able to see the deck chains without looking directly at them, I instinctively put my right hand up in front of my face. No one wants to walk into the flap edge while stepping over the chains. I never intended to touch the plane; I just didn't want to walk into it.

The edge of the folded wing was right at my eye level. From out of nowhere a maintenance chief appeared and he immediately snapped his arm up to point at the wing I was



trying to avoid. At just that moment, I felt the inboard edge of the aileron with my right palm. You know the one with a razor-sharp edge that leaves no gap with the flap when unfolded? I looked up to see that the wing was unfolding over me!

I yanked my hand out of there so fast I nearly pulled myself over backward. After watching the wing come all the way down and lock into place, I carefully made my way around it and heartily thanked the chief.

As I continued down to CVIC, it hit me: I had just nearly lost my right hand! I've played the guitar for 15 years, and that one event would have killed that hobby—not to mention my career.

The next day, I was standing a primary flight watch during a launch. I watched the Hornets as their wings

unfolded as they approached the cat, aware that my nerves were still shaken.

After four months of walking around the flight deck, I'd felt confident. I felt like I'd done everything right. I knew where the dangers were and what I needed to do to get around them. And yet, I still almost lost my hand. To this day, the memory of the sensation of the inner edge of that Hornet aileron still sends a chill down my spine, and I catch myself wanting to instinctively yank my hand back.

Another thing I did wrong was not getting the name of that chief and submitting him for a Safety Pro of the Quarter award. I've been kicking myself ever since. I wish I could give him a medal. If you're out there reading this, Chief, thanks for keeping a shipmate out of trouble. 🦅

Ltjg. Hennessy is an ECMO with VAQ-132.



# Guess We'll Have to Miss Our Tinker Burge

by Lt. Julie Randolph

**A**fter a pleasant weekend in San Diego, we launched on our return trip to NAS Jacksonville. The crew was composed of two second-cruise JOs (one a brand-new mission commander) and two nuggets fresh from the FRS. With only 60 hours in type, the COTAC was still wet behind the ears, but eager to apply what he had learned and ready to acquire new knowledge.

After the climbout, ATC cleared us direct to our fuel stop at Tinker AFB. Well on our way to an uneventful flight, and blessed with perfect weather and no turbulence, we started to discuss some of the differences between the FRS and fleet life. We talked about everything from plane-captain signals to in-flight refueling, while maintaining SA, monitoring instruments, and considering divers along the route.

Eventually we got to the buddy store; every Viking crew becomes intimately familiar with it, but doesn't get a lot of practice in the FRS. We discussed hand signals, transfer procedures, and switchology, along with air-speed limitations and other considerations. Rather than simply discuss the procedures, I decided to operate the store and even talked about how we don't tank over land. Surely, energizing the RAT wouldn't hurt anything. Famous last words!

After reiterating the airspeed limitations, I flipped the switch, and the RAT spun up. However, when the hydraulic-

pressure light illuminated on the console, it indicated a problem with the store. I secured power. To my surprise, the RAT failed and continued spinning. We pulled the circuit breaker associated with the system as NATOPS directed.

Hmmm, it was still turning, so I asked the TACCO to pull out the big blue NATOPS and see if there was anything in there that wasn't covered in the PCL.

I tried slowing the plane down, but it didn't make any difference. We talked about the situation, and I even commented that the only other thing we could do was to jettison the store, but it wasn't justified. The RAT was just spinning out there. It didn't seem to be hurting anything. (More famous last words.)

The TACCO was just securing the "big blue" when I heard a bang followed by what sounded like a gigantic spoon in the garbage disposal. I guessed what had happened but was still stunned to see a huge hole in the left side of our engine, all the blades of the RAT gone, and the access panel of the buddy store missing. At this point, time seemed to slow down, and I remember checking the engine, pressurization and fuel indicators to see what was happening to our airplane.

Viking engines have a reputation of being able to take a lot of punishment. I am an ardent believer after seeing what was left of that engine and realizing that all the instruments were indicating that nothing was wrong. Not a blip. However, I was sure that wouldn't last long.



PH2 James H. Watson

I told the crew that we had a hole in our engine, and I was shutting it down. Did anybody disagree? The COTAC gave me a look of disbelief as though I was joking, but there was no disagreement.

I told him, “Declare an emergency!” The TACCO, who had been crewed with me on cruise, knew I was serious. We declared an emergency with ATC and told them we were proceeding to an Air Force field that had a long runway and arresting gear.

We went through all the checklists for a single-engine landing, along with the field brief (including the fact that the field had no landing aid system). ATC told us the winds and offered us a choice of runways, allowing us to choose the most suitable one. We had been about 80 miles out when the problem occurred, so we had time to discuss what was happening to the aircraft.

Elevation was a concern (we usually work at sea level), so we talked about radalt discipline and COTAC backup on the approach. We came in for the approach, and I was glad my last NATOPS check had included a “no landing aid” approach. We flew our approach to an arrested landing without incident, backing ourselves up with internal CCA. On the tug, the nose cone of the buddy store flew off and careened down the runway.

The crash crew made a FOD walkdown for us, and we taxied to the transient line.

As we climbed out of the plane, the shock on the faces of the line crew spoke volumes. Since the rest of the crew had only my descriptions of the damage to the aircraft to go on, they also paled a little to see the remains of the tough little number one engine.

Those blades could have penetrated a fuel tank, the fuselage, or a flight-control system. They could have caused the engine to catch fire or explode. I had landed S-3s several times with only one engine on the carrier and practiced it in the FRS (now a discontinued practice). The COTAC and I maintained sharp awareness of possible divers along the route and were ready to react when the unexpected occurred. The TACCO and SENSO provided excellent backup to the frontseaters on the emergency procedures, giving the pilot a field brief, complete with elevation and minimum safe altitude. We also had ATC controllers who understood an emergency, gave us our options, and then let us fly our aircraft.

The crew coordination that followed this mishap is why I’m writing this article. We knew where we were going because we had been talking about it. We were almost nose-on to a field we knew had arresting gear and a long runway. The COTAC commented after we landed that after we declared an emergency, it was just like the simulator. I guess that’s why we have those 0600 emergency procedure trainers that everyone hates. 🦅

Lt. Randolph was a pilot with VS-22 at the time of this story. She is now an instructor with VT-86.

# Getting My Third Trap the Hard Way

by Ltjg. Brian Baumhover

**I**t was a great day off the coast of Jacksonville as our flight of three Hornets searched for USS *John F. Kennedy* to begin our carrier qualifications for the FRS. We found her with no problem and swooped down to line up for the initial. I caught a couple of peeks at the boat through my lead as the excitement ramped up but soon had to tighten it up for the initial.

"Ninety-nine Hornets, thirty-five knots, half flaps, thirty-three K," the ship called as my lead broke, so I turned on the dumps to get rid of an extra thousand pounds of gas. I lined up on downwind, then got the gear and flaps down.

"Two Oh Two's abeam," I called. The LSO acknowledged with a click.

"Two Oh Two's abeam, gear." Click.

"Baumhover, seven point oh." Click. Nice and smooth.

With that done, I started working on the approach turn. A combination of being close abeam and occasional gawks at the boat had me sliding across the linoleum at the start. I gave another award-winning radio speech that elicited a reassuring, "Roger, ball," from the LSO. Every last chunk of my brain became focused on a shiny light, some lines painted on a moving deck and an amber donut.

The first trap with an inadvertent frequency change from my face on the up-front control was a reminder that

the plane I was in now was a little more violent than the T-45. Throttle back, hook up, and wham! Off the cat. A couple of rounds of this, and I began to loosen my kung-fu grip on the stick and eliminated the inadvertent frequency changes.

After two traps, I was on the deck getting gas, breathing, and taking in the atmosphere when I remembered what an insane idea this seemed to be. I was amazed at the precision and professionalism on the deck with the launching, moving, repairing, and recovering of aircraft. A couple of troubleshooters and checklists later, I was on the cat again for my third shot in the Hornet. I couldn't help but smile as the jet kept accelerating, and I was sent off the boat with what seemed like little or no effort from the catapult.

At the end of the cat stroke, I stopped smiling as I noticed all my displays had blanked out. Water, VSI, red chevron, VSI, water, radar altimeter, water. I climbed away with a positive VSI and a good radar altimeter. I felt OK as I climbed and tried to set a steady 600 feet on the radar altimeter. But I now had no HUD, no left or right DDI, no MPCD, none of the Gucci gadgets that I had become accustomed to in such a short time after leaving the T-45 a year earlier.

After a few comments from the tower, I turned downwind and cycled the DDIs, the HUD, and the MPCD



with no positive response. I started talking to the Hornet representative and cycled the displays once again to no avail.

"Hornet Rep, Two Oh Two," I called.

"Go ahead." After multiple iterations of the on-off theory, the rep and I decided to bring it in and told the LSOs about the situation.

At three miles, I started my approach turn, concentrating on setting the VSI and hitting my altitude windows. I was on the instruments with an occasional look at the boat. At a deep 90, I told the LSO I had no displays and continued to concentrate on getting to a decent start.

I rolled into the groove a little high and called the ball. I settled the VSI down and milked the ball down the chute. Slam! The jet slowed as I caught a 3-wire.

The yellowshirts taxied me behind the island and chained the jet. Now, all the lights in the cockpit came on with a high-pitched, screeching sound in my helmet, which flickered on and off, then went steady for 10 to 15 seconds. I signaled to the troubleshooters that I was shutting down the left engine.

As I secured the left engine, all the fire lights came on with the aural fire-warning caution. I shut down the right engine and got out.

Later, the plane captain took me to the starboard side of the jet and showed me the electrical relay panel that had caught fire.

"You were extremely lucky, sir," he said. The number two electrical relay panel had caught fire because of friction between wires. More than two-thirds of the 120-wire bundle had burned through.

I hadn't realized the severity of the problem while I was flying around the pattern, but it could have deteriorated quickly if not for the timely decisions made by the Hornet representative, the LSOs, and the Air Boss as they wondered, "Monkey, where in the hell are you going?"

I would also like to mention the outstanding job the VFA-106 maintenance crew did to get that bird up and ready to fly off the boat a few days later. I finished the day period in another jet and was glad I caught that wire.

Lt. Jeff Heiges, the VFA-106 ASO adds:

The replacement pilot handled this situation very well. Several items were considered when deciding whether to bring him aboard, and they are worth mentioning here. First, he had only two FA-18 traps, and it would have been easy to take the conservative approach and send him to the beach. Also, a "no display" approach on steam gauges is a tough approach for any Hornet pilot, let alone one on his third trap. However, the tower rep and LSOs considered the following:

1. Solid day passes with no adverse trends
2. Good weather
3. The rep's experience with single and multiple flashing displays most likely meant electrical or generator shorts
4. Most importantly, the rep didn't want to send a student 140 miles over water to find a divert field with no navigational aids besides a wet compass.

The LSOs and the tower rep decided to give him one shot to bring the jet aboard. The LSOs moved the waveoff window out for the straight-in approach, and Ltjg.

Baumhover flew a solid pass to an OK (underline) 3-wire.

Looking back, we were very fortunate that he got the jet aboard because of the electrical fire. If we had told him to divert, the electrical fire would probably have spread and led to an even more serious flight emergency. Worst case, we could have possibly lost an aircraft or pilot en route to the divert field.

This was definitely not a black-and-white situation, but in hindsight, it was a timely decision to trap him aboard the *Kennedy*. 🛩️





# Blacked-Out Behind the Boat

by Lt. David Kennington

**S**hakedown cruise for USS *Harry S. Truman* brought our air wing to the southern Puerto Rican op area for some pre-holiday underway time. Three days into the detachment, my crew and I launched Case I into a small patch of clear sky the ship managed to find between the groups of thunderstorms forming over the Caribbean that afternoon.

As we arrived on station, we watched as the hole we had launched into quickly closed behind us while a line of storms developed from the north PROA to the southern warning areas. Cruising on the eastern edge of the warning areas put us on one side of the storms and the ship on the other.

The sun was setting as the first cycle ended with, so a break in the AICs, we switched on the storm scope to have a look. Driving down the line of anvils, we searched for a break in the lightning strikes that showed up in masses on our scope.

After two counter-narcotics detachments to Puerto Rico, I'd worked my way back through more than one collection of thunderstorms, but this set didn't offer any gaps to fly through.

As the second cycle prepared to launch, CAG asked us for a PIREP. When we gave him the current conditions in the Whiskey areas and the forecast for our divert, Roosevelt Roads, he cancelled the event and told us to recover. We pushed out of the warning areas to the south,

found the best-looking seam in the storms, and pressed into the goo to find the ship.


The carrier, blanketed in a few imbedded thunderstorms, still wanted us for a trap-cat-trap, so we marshaled behind the boat at 1,200 feet, on a pitch-dark night and in driving rain. As we turned inbound on our approach, there was an audible click, and the cockpit went black—no caution lights, no instrument lights. It was as if someone had pulled the power plug on our aircraft. The engines surged a bit, but I could still hear them running, so I knew we had not become a glider.

My next thought was that we had suffered a dual-generator failure. The E-2 has an emergency generator that is supposed to come on line within a fraction of a second of losing the two engine-driven generators. The brief delay causes the lights to flash off and come right back on.

After that fraction of a second had passed, however, followed by a couple more seconds with me sitting in the dark thinking, "This is not supposed to happen," I managed to flip the flood-light switch on and look at our gyros. All three were showing OFF flags. Our radio was also dead, and our TACAN needle was spinning. At this point, I was in a slight descent and, as the altimeter touched 1,100 feet, the RO, a first-tour NFO who'd been in the squadron about four months, said, "I'm showing 100 feet low!"

Considering the circumstances, I didn't think my air work was that shabby. Putting ego aside and remembering

Knowing my crew was hawking the altimeter let me devote a little more of my attention to troubleshooting our slightly unusual problem and keeping the plane right side up. After about 15 seconds without primary power, my copilot reached for the switch to manually select the

Second, the foundation for smooth coordination between our crewmembers during this flight was set during the brief. Specifically, during the flight brief and ORM discussion, we delegated responsibilities for emergencies and ensured that even the most junior crew member understood his role. 

Lt. Kennington flies with VAW-123.

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# BROWNSHOES IN ACTION COMIX

"The kind real aviators like"

by Cdr. Ward Carroll

## One Day in the Safety Department...

All right, let's make this safety stand-down a real grabber.

Yeah, there's nothing worse than the same ol' safety routine.

It's snoozola.



We need to really give the message some oomph!

Time to think outta the box.

Let's raise the bar of the presentation, go totally Siegfried and Roy.



OK, that was a respectable nod toward innovation. We'll just have the aircrew play NATOPS jeopardy like we always do.

Whew! Thank god. I'll go find the game board for the front of the ready room.

I actually scared myself with my aggressive approach to change just then...

